

21 April 1997



Maintenance

**HANDLING AND STORAGE OF EXTERNAL
FUEL TANKS AND AIRCRAFT FUEL
SYSTEMS MAINTENANCE**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Supersedes 926 FGR 66-28, 28 February 1994

Pages: 4
Distribution: F

This Fighter Wing Instruction (FWI) implements AFPD 21-1, *Management of Aerospace Equipment Maintenance*. It establishes requirements and procedures; creates a viable maintenance program for aircraft fuel systems maintenance and the acceptance issuance handling of all A/OA-10 aircraft and external fuel tanks. This FWI references AFRESI 21-101, *Objective Wing Aircraft Maintenance*; Technical Orders (TOs) 1-1-3, *Inspection and Repair of Aircraft Integral Tanks and Fuel Cells*, 00-25-172; *Ground Servicing of Aircraft and Static Grounding/Bonding*, 00-85A-03-1, *External Aircraft Fuel Tanks/Cells*; AFOSH STDs 91-38, *Hydrocarbon Fuels-General*, and 91-66, *General Industrial Operations*.

SUMMARY OF REVISIONS

This revision designates the policies, procedures and responsibilities of the A/OA-10 aircraft External Fuel Tank Program. A (I) indicates revisions from the previous edition.

1. Responsibilities:

1.1. All Maintenance Supervisors and Fuel Systems personnel must ensure all maintenance personnel comply with the provisions of this FWI.

2. Requirements:

2.1. All fuel system maintenance requiring tank entry will be performed in the primary fuel system repair area, Building 195, and is considered major fuel systems maintenance. All other fuel system maintenance will be considered minor maintenance and can be performed in the alternate repair area, outside Building 195. The alternate repair area will only be used when the primary area is occupied.

2.2. All personnel requiring entry into a fuel system repair area will obtain clearance from the fuel systems unit supervisor on duty and enter only through an authorized entry point. The fuel system

supervisor, or person in charge, will ensure the person meets the requirements of TO 1-1-3 prior to entry into the area.

2.3. Smoking is prohibited throughout all fuel systems repair facilities and the external tank storage area.

2.4. When maintenance is performed inside building 195, or alternate area, the fuel systems specialist will have a hand held radio available that is intrinsically safe for emergency communication and support, as required.

2.5. No aircraft or equipment will be towed into or out of any fuel systems repair area without clearance from the fuel systems supervisor on duty.

2.6. The aircraft forms will remain with the aircraft at all times during fuel systems maintenance except when removal is approved by the fuel systems supervisor for records check.

2.7. No external tanks or equipment will be moved into or out of the tank storage area without clearance from the Fuel Systems Supervisor on duty.

2.8. The Maintenance Operations Center (CPM) will notify fuel systems personnel when winds reach 30 knots, at which time all outside open fuel systems maintenance will be suspended and all access doors, covers, filler caps and other openings removed for maintenance will be temporarily closed.

2.9. CPM will notify fuels personnel when lightning is within a ten mile radius and within a five mile radius to ensure all open fuel systems maintenance is suspended before lightening is within a three mile radius. All access covers, filler caps and other openings removed for maintenance will be temporarily closed.

2.10. At no time will other maintenance be performed on any aircraft undergoing fuel systems maintenance without the approval of the fuels systems supervisor on duty.

3. Procedures:

3.1. Prior to the delivery of the aircraft to the fuel system area the 706th Flying Squadron Maintenance (FSM) Production Supervisor will ensure the aircraft is properly configured to facilitate required maintenance in accordance with (IAW) fuel systems instructions as follows:

3.1.1. Dearth aircraft and download all munitions to include all versions of 30mm ammunition from the GAU-8 gun system.

3.1.2. Ensure fuel system and FSM personnel depanel the aircraft as required for the maintenance to be performed.

3.1.3. Install all safing devices.

3.1.4. Remove liquid oxygen (Lox) converter.

3.1.5. Ensure the pylons are removed as required.

3.1.6. Ground aircraft and secure hanger checklist to aircraft.

3.2. Prior to delivery of external fuel tanks into the tank storage area, FSM will ensure:

3.2.1. External tanks are defueled and drained of all fuel.

3.2.2. External tanks are properly identified with correct and properly completed tags placed in forms bag and attached to forward lug on tank.

3.2.2.1. DD Form 1574, **Serviceable Tag - Materiel**, if tank is serviceable.

3.2.2.2. AFTO Form 350, **Repairable Item Processing Tag**, if tank needs repairs.

3.2.3. Fuels personnel are dispatched by CPM to any aircraft experiencing external fuel tank problems prior to the removal of the tanks from the aircraft.

3.2.4. All broken fuel tanks are turned into the fuel shop as soon as possible after discrepancies are known.

3.2.5. Broken tanks are loaded into Core Automated Maintenance System (CAMS).

3.2.6. Tanks are secured with straps to dolly or trailer during transport.

3.3. The Fuel System Unit will:

3.3.1. Ensure all safety requirements and checklist items are complied with prior to fuel system maintenance.

3.3.2. Ensure all external tanks are properly capped with appropriate environmental covers.

3.3.3. Not accept fuel tanks until Acceptance Checklist, Attachment 1, has been accomplished and any on-the-spot corrective action complied with.

3.3.4. Verify a broken tank is properly loaded in CAMS prior to receiving tank.

4. Forms Prescribed. AFTO Form 350; DD Form 1574.

ROBERT E. LYTLE, Colonel, USAFR
Commander

Attachment 1**600 GALLON EXTERNAL FUEL TANK ACCEPTANCE CHECKLIST**

The following checklist will be used for daily issue and turn-in of fuel tanks. Exceptions would be made during Generation Exercises only.

1. Ensure all tags are properly and completely filled out with the required information as per 00-20 series technical data.
2. Inspect tank for general cleanliness.
3. Ensure tank has been completely drained of fuel, water or any other liquids before turn-in (also after installation).
4. Inspect negative pressure relief valve for serviceability and freedom of movement.
5. Check for loose or missing hardware, i.e., screws, bolts.
6. Inspect nose, center and tail section for dents, nicks, scratches and gouges.
7. Ensure fuel and air standpipes and cannon plugs are serviceable.
8. Inspect tail fins for cracks or delamination.

INSPECTED BY: _____
(NAME) (DATE)